

ABSTRACT

A method for measuring incident light employing a simple semiconductor structure provided with a single electron-capturing section corresponding to incident light, and a sensor having a spectroscopic mechanism employing the same are provided. A spectroscopic sensor includes a semiconductor substrate (1), a first diffusion layer (2) provided on the semiconductor substrate (1), a second diffusion layer (3) provided at a part of the first diffusion layer (2), and an electrode film (7) provided on the first diffusion layer (2) with an insulating film (4) provided therebetween, the electrode film (7) transmitting the incident light and being applied with a gate voltage. In the spectroscopic sensor, the gate voltage is varied, the depth (position) for capturing electrons generated in the first diffusion layer (2) by the incident light is varied so as to correspond to the gate voltage, and a current indicating the quantity of the electrons is measured. Thereby, wavelength and intensity of the incident light are measured.